Claims

1. - 17 (cancelled)

18. (Currently Amended)   A method for providing an estimate of estimating the impact of a specific promotion on product performance for a product in the market to an user, the method comprising:

(a) identifying at least one market event whose occurrence will impact product performance;

(b) collecting market data including promotion and product performance data and generating descriptive statistics for each one or more market data variables;

(c) selecting a model for the relationship between the at least one promotions and product performance, wherein selecting the model comprises:

(d) (1) detecting a promotion lag structure in the market data by applying a cross-correlation function to the market data including promotion and product performance data; to systematically detect a promotion lag structure in.

(e) (2) examining the temporal pattern of market data including promotion and product performance data against time and accordingly selecting a functional form for the promotion lag structure which fits the occurrence of the at least one market event;

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(f) (3) applying a cross-correlation function to the market data and

promotion lag structure, and other market variables other than promotions to systematically

detect data lag structures for the other market variables other than promotions; and

(g) (4) computing model parameters by fitting the model to market

variables and promotion variables, lag structures, market events and market inputs; and

(e) (d) calculating computing product performance attributable to the specific promotion

according to the flitted fitted model; and

(e) providing said computed product performance attributable to the specific promotion to said

user as an estimate of promotion impact.

19. . (Previously Presented) The method of claim 18, wherein fitting the model comprises

evaluating a model residual to detect any auto-correlation in the model residual, and accordingly

including an autoregressive structure for the model residual in the model.

20. (Currently Amended)   The method of claim 18, further comprising systematically

detecting the promotion lag structure, by repeating wherein applying a cross-correlation function

to the market data comprises, wherein the repeated application comprises :

fitting a univariate auto-regressive model to the promotion data;

regressing the product performance data on a first residual series from fitting the model,

using variables known to impact product performance;

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applying the fitted model to transform a second residual series obtained by regressing the

product performance data to determine a third residual ~~series~~ series:

determining the cross-correlation function between the first and third residual series

residual to assess the lag structure; and

selecting a functional form for the lag structure by fitting the market data.

21. (Currently Amended)   A system for providing an estimate of ~~estimating~~ the impact of a

specific promotion on product performance for a product in the market to an user., wherein at

least one market event whose occurrence will impact product performance is identified, the

system comprising:

~~(a) means for identifying at least one market event whose occurrence will impact product~~

~~performance;~~

(b) means for collecting market data including promotion and product performance data

and generating descriptive statistics for ~~each~~ one or more market data variables;

(c) means for selecting a model for the relationship between ~~the at least one~~ promotions

and product performance, wherein the means for selecting the model comprises:

~~(d)~~ (1) means for detecting a promotion lag structure in the market data by

applying a cross-correlation function to the market data ~~to systematically detect a promotion lag~~

~~structure in.~~

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~~(e)~~ (2) means for examining the temporal pattern of market data including

promotion and product performance data against time and accordingly selecting a functional

form for the promotion lag structure which fits the occurrence of the at least one market event;

~~(f)~~ (3) means for applying a cross-correlation function to the market data

and promotion lag structure, and ~~other~~ market variables other than promotions to systematically

detect data lag structures for the ~~other~~ market variables other than promotions; and

~~(g)~~ (4) means for computing model parameters by fitting the model to

market variables and promotion variables, lag structures, market events and market inputs; ~~and~~

~~(e)~~   (d) means for ~~calculating~~ computing product performance attributable to the specific

promotion to said user as an estimate of promotion impact; and

(e) means for providing said computed product performance attributable to the specific

promotion to said user as an estimate of promotion impact.

22. . (Previously Presented)   The system of claim 21, wherein means for fitting the model

comprises means for evaluating a model residual to detect any auto-correlation in the model

residual, and means for accordingly including an autoregressive structure for the model residual

in the model.

23. . (Currently Amended)   The system of claim 21, wherein means for applying a cross-

correlation function to the market data to systematically detect a promotion lag comprises means

for:

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fitting a univariate auto-regressive model to the promotion data;

regressing the product performance data on a first residual series from fitting the model,

using variables known to impact product performance:

applying the fitted model to transform a second residual series obtained by regressing the

product performance data to determine a third residual ~~series.~~ series;

determining the cross-correlation function between the first and third residual series

residual to assess the lag structure; and

selecting a functional form for the lag structure by fitting the market data.

REMARKS

Summary of Office Action

Claims 18-23 are pending in the application.

Claims 21-23 have been rejected under 35 U.S.C. § 101 as involving "living"

subject matter in their apparatus structure. Further, claims 18-23 also have been rejected under

35 U.S.C. § 101 as failing the "useful, concrete, and tangible result criteria." Additionally,

claims 18-23 been rejected under 35 U.S.C. § 112, first and second paragraphs.

Claims 18, 19, 21 and 22 have been rejected under 35 U.S.C. § 102 as being

anticipated by Basara, Lisa Ruby, "The Impact of a Direct-to-Consumer Prescription Medication

Advertising Campaign on New Prescription Volume," Drug Information Journal, 1996, Vol. 30,

715-729). ("the Basara Reference"). Alternatively, the Examiner has rejected claims 18, 19, 21

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and 22 as being anticipated by Box 1975. The Examiner has also rejected claims 18, 19, 21, 22

as being anticipated by Leone 1987. As a final alternative, the Examiner has rejected claims 18-

23 as being anticipated by Helmer.

In addition to the § 102 anticipation rejections, claims 18-23 have been rejected

under 35 USC §103(a) as being obvious from Basara in view of Helmer; claim 2 has been

similarly rejected as being obvious from any one of Basara, Box 1975 and Leone 1987 in view of

Grapetine; claims 6-7 have been similarly rejected as being obvious from Leone 1987 in view of

Hillmer; claims 20 and 23 have has been similarly rejected as being obvious from as being

obvious from Leone 1987 in view of Hooley et al., or alternatively from Box 1975 in view of

Haugh et al. Lastly, claims 11-17 have been rejected under § 103 (a) as being obvious from

either one of Basara, Box 1975 and Leone 1987 or Helmer in view of in view of Didow et al.

The Examiner has noted, and objected to, informalities in claims 18, 20, 21 and

23.

Applicant's Reply

Applicants have amended the claims to address the informalities that were kindly

noted by the Examiner, and for clarity.

Applicant respectfully traverse, the § 101 rejections, the § 112 rejections, and the

prior art rejections.

35 U.S.C. § 101, living matter rejections. (Office Action pages 2-3 § 2)

Claim 21 called for a "means for identifying at least one market event whose

occurrence will impact product performance." The Office Action mistakenly attributes this

means to be 'a living person' or 'analyst'. Applicants note that the claimed means is an

inanimate computer which identifies a statistically significant market event using well

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established objective statistical criteria without any living person or being's subjective

involvement. Accordingly, the claimed subject matter is compatible with the statutory

provisions of 35 U.S.C. § 101.

In any case, to advance prosecution of this application, applicants have, without

prejudice, amended claim 21 so that the disputed subject matter is now recited as part of the

preamble and not as a claim limitation.

Applicants submit that claims 21-23 do not call for a human as part of the system

structure.

<u>35 U.S.C. § 101, useful, tangible and concrete result rejection, (Office Action</u>

<u>pages 3-6 §§ 3 - 8)</u>

Applicants respectfully submit that the Office Action misunderstands the

disclosure and the nature of the claimed invention.

<u>Issue of concreteness (Office Action pages 3-6 §§ 3 - 7)</u>

The Office Action takes the position that the claim 18 steps of (1) identifying the

market event, (2) selecting a model for the relationship between a promotion and a product, (3)

computing model parameters by fitting a model, and (4) calculating product performance

attributable to the promotion, "require subjective decisions on part of a human research analyst."

and depend on "the investigative interest/goal and mood of this analyst. The Examiner further

disputes applicants' previous submission that the steps may be performed by manually or by a

computer, because the specification describes such steps, for example, "only in terms of manual

identification".

Applicants respectfully traverse.

First, applicants first note that the embodiments described in the specification are

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exemplary and do not limit the scope of the invention only to the described embodiments themselves.

Second, applicants note the specification p. 5 lines 19-20 cited in the Office Action for support of the Office Action's position states "This step _may be_ performed manually by an analyst" (emphasis added). Thus, the specification does not require a living person to perform these steps, (which only _may be_ performed by an analyst). A person of ordinary skill in the art reading the specification will readily understand that, conversely, a computer may perform these steps.

Third, applicants submit that the Office Action mistakenly attributes "subjective behavior and moods' to the analyst who may perform the steps. Applicants submit that a person of ordinary skill in the art will with reasonable certainty understand that the analyst who may perform these steps has at least ordinary skill in the art (e.g., of statistical and mathematical analysis). Accordingly, such trained or skilled analyst will be guided by objective criteria (e.g. statistically acceptable regression values, probability cutoffs, correlation values, coefficient values etc.) that are well established in the art for these steps (done manually or by computer).

For example, a person of ordinary skill in the art will readily understand that "fitting a model" involve standard textbook criteria for "goodness of fit" (e.g., 99% or 99.999%).

Fourth, applicants submit that merely because a result is statistically qualified does not mean that the claimed process is irreproducible or lacks concreteness or tangibility. (For example, a forecasting process may give results such as 30% chance of rain, or 50% chance of rain tomorrow — these are reproducible concrete results of the forecasting process, operated for example at 30% and 50% acceptably values, respectively)

Applicants submit that the claimed steps produce useful, tangible, concrete and

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reproducible results even when performed manually by an analyst skilled the art. The claimed

process is stochastic (i.e., each step result or output is a consequence of its input — the previous

step result or out put). There is no variability or irreproducibility of the result for a given set of

inputs. The set of inputs is not random or subjective, but based as readily understood and

established criteria used in the statistical arts, base

      Applicants further note that the Office Action (page 4 § 5) mistakes accuracy of

the result (for example, of market event selection or model selection) with reproducibility and

concreteness. Applicants note that the Examiner acknowledges the specification describes

evaluating and validation of the selected model for more accurate results, and appears to require

that iterations for finding the best model should be recited in the claims.

      Applicants disagree, because the invention is operative as claimed without

iterations to find the best models or events. (For analogy, a 50% chance of rain result of a

forecasting process may be wrong, but the forecasting process is operative without requiring the

meteorologist to keep on refining her "rain model" to find the best model until all forecasts are

100% accurate). Similarly, with method claim 18 and associated system claims, when the best

market event is not identified, or when the best model is not used, the claimed process remains

operative and produces a concrete, tangible, and useful result

      Issue of concreteness and tangibility (Office Action page 6 § 8)

      The Office Action, page 6 § 8, interprets the step of "calculating a product

performance attributable . . .", as a step that produces equations.

      Applicants respectfully submit that the Office Action's interpretation and analysis

is incorrect.

      First, applicants note the claim recitation calls for "calculating a product

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performance ... according to the fitted model [of product performance]". This recitation will

be readily understood by a person of skill in the art as calling for calculating a product

performance value from the fitted model. The fitted model itself is the "equation" for the

product performance.

Second, claim 18 further calls for "providing said product performance

attributable to the promotion to said user as an estimate of promotion impact." Thus a concrete

and tangible result (estimate) is provided to the user (irrespective of the form of product

performance).

Thirdly, to advance prosecution applicants have, without prejudice, amended the

claims to recite 'computed' instead of 'calculated,' and "providing said computed product

performance" to the user." where 'compute' a synonym of 'calculate' is defined as

"v.tr. To determine by mathematics, especially by numerical methods: computed

the tax due. " and

" v.intr. To determine an amount or number." (See Answers at com, website

attached)

This claim amendment makes it abundantly clear that the a tangible and concrete

result (i.e., amount or number of product performance attributable to the promotion) is provided

to the user.

For at least the foregoing reasons, Applicants submit that claims 18-23 conform to

all requirements of § 101

35 U.S.C. § 112, first paragraph rejections (Office Action pages 6- §§ 9 - 15)

Applicants respectfully submit that this § 112 rejection, like the § 101 rejection is

also based on a misunderstanding or misinterpretation of the disclosure and the nature of the

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claimed invention.

As discussed above in the context of the § 101 rejection, the Examiner mistakenly imports a "subjective" analyst into the claims. The claims do not call for a "subjective" analyst. Further, the Examiner confuses accuracy of results (or intervening event identifications or model selections) with undue experimentation. The claims do not call for any experimentation to produce the desired result, which is to provide a user with "a computed product performance attributable to the promotion to said user as an estimate of promotion impact."

Further, as discussed in the context of the § 101 rejection, standard, objective, textbook criteria exist in the art for each of the claimed steps. Applicants submit the specification fully enables the claimed invention, which can be implement on a computer or by a person of ordinary skill in the art. The specification does not lack any guidance for such implementations, but on the contrary makes repeated reference to the "statistical" art to direct attention to the ordinary skills that may be needed for implementations.

Applicants request reconsideration and withdrawal of this rejection

35 U.S.C. § 112, second paragraph rejections (Office Action pages 9-10 § 17-15)

Applicants have amended the claims to provide antecedent basis for the terms used therein and for clarity. Applicants submit that the claims now conform to all requirements of § 112, second paragraph.

Prior art rejections

Applicants note that the Office Action has interpreted the claims to include merely an "aspiration" to detect a promotion lag structure. Applicants believe this interpretation

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is incorrect.

Accordingly, for clarity have amended the claims so that "detecting a promotion lag structure" is a positive step and not merely an aspiration.

It appears that the Office Action has repeated the prior art rejections form the earlier Office Action based on the foregoing limited scope interpretation.

Since the claims have now been amended to clarify the scope, applicants request reconsideration of the previous Remarks distinguishing the prior art.

In particular applicants submit that the prior art, viewed individually or in combination, does not show, teach, or suggest, the individual element or the combination of elements in each of claims 18-23.

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